

## **REMARKS**

### **I. Support for Amendments**

Support for amendment to the title of the application may be found, *inter alia*, in the specification and claims of the presently claimed invention. Accordingly, Applicants submit that no new matter has been added by the foregoing amendment. Claims 1, 20, 21, 28, 29, and 45 have been amended to more clearly define the claimed invention. Support for the amendment to claims 1, 20, 21, 28, 29, and 45 can be found in the specification.

No new matter has been added by this proposed amendment nor does this amendment raise new issues or necessitate the undertaking of any additional search of the art by the Examiner. Applicants' proposed amendments adopt the Examiner's implied suggestion made on page 4 of the Final Office Action dated May 6, 2003. Therefore, this Amendment under 37 C.F.R. § 1.116 should allow for immediate action by the Examiner. The proposed amendments, moreover, place the claims in condition for allowance or, at least, in better form for appeal, if necessary.

### **II. Status of the Claims**

Claims 1-49 are currently pending in this Application. Claims 1-45 are currently rejected. Claims 46-49 are currently withdrawn from consideration.

Claims 1, 20, 21, 28, 29, 39, and 45 have been amended. Claims 1, 20, 21, 28, 29, and 45 have been amended only to further define the term "matrix material", as set forth in the specification. Accordingly, as stated above, the amendments are supported by the claims and specification as originally filed and, therefore, no new matter has been added.

### III. Rejection under 35 U.S.C. § 102(a)/103(a) Over Novich

Claims 1-3, 5-37, and 39-45 stand rejected under 35 U.S.C. § 102(a) as being anticipated by or in the alternative under 35 U.S.C. § 103(a) as being obvious over WO 99/44960 ("Novich") for reasons discussed at pages 5-7 of the Office Action. Applicants respectfully traverse this rejection for at least the reasons that follow.

#### A. Rejection of Claims 1-3, 5-37, and 39-45

##### 1. 35 U.S.C. §102(a) Rejection

A rejection under §102 is proper only when the claimed subject matter is identically described or disclosed in the prior art. *In re Arkley*, 455 F.2d 586, 587 (C.C.P.A. 1972). "For anticipation under 35 U.S.C. §102, the reference must teach every aspect of the claimed invention either explicitly or impliedly." M.P.E.P. §706.02 (8th ed. 2001). The identical invention must be described in as complete detail as is contained in, and must be arranged as required by, the claim. M.P.E.P. § 2131. Indeed, in order to anticipate the claimed invention, a reference must "clearly and unequivocally disclose the claimed compound or direct those skilled in the art to the compound without any need for picking, choosing and combining various disclosures." *In re Arkley*, 455 F.2d at 587. Importantly, the absence of a single element or limitation indicates the reference neither describes nor anticipates the claim. M.P.E.P. §2131. In the present case, Novich fails to anticipate claims 1-3, 5-37, 39-45 of the presently claimed invention because the reference fails to describe every element that is included in the rejected claims.

According to the Examiner, Novich anticipates the presently claimed invention due to the fact that the "sizing" composition of Novich "meets each and every chemical

limitation of the presently claimed matrix material and that the Applicant is not claiming a matrix material which functions to impregnate the reinforcing fabric.” Final Office Action at page 4. Moreover, the Examiner states that Applicants do not differentiate Novich from the presently claimed invention, stating that “merely using the term ‘matrix’ in conjunction with ‘in contact with’ does not imply that the matrix material impregnates the reinforcing fabric”. *Id.* at page 5.

Applicants respectfully submit that the Examiner’s concerns have been rectified with the proposed amendments to claims 1, 20, 21, 28, 29, and 45 in which the disputed phrase “in contact with” is replaced with “impregnating.” As a result of this proposed amendment, it is the understanding of the Applicants that the matrix material of the presently claimed invention impregnates at least a portion of the reinforcing fabric to form a three-dimensional structure, as opposed to the “thin coating of sizing” that is mentioned by the Examiner and found in Novich. *Id.* at page 4.

Applicants wish to point out to the Examiner that conspicuously absent from Novich is the existence of an impregnating matrix comprising at least one non-fluorinated polymer and at least one inorganic filler as presently claimed. Since Novich does not provide for the existence of an impregnating matrix material with at least one non-fluorinated polymer and at least one inorganic filler, Novich clearly does not teach every aspect of the claimed invention either explicitly or impliedly as required by 35 U.S.C. § 102(a). Applicants therefore respectfully request that the Examiner withdraw the § 102(a) rejection of claims 1-3, 5-37, and 39-45, which are allowable over Novich.

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2. 35 U.S.C. §103(a) Rejection

To establish a prima facie case of obviousness over a single reference or a combination of references, the Examiner "bears the initial burden of factually supporting any prima facie conclusion of obviousness." *Cf. In re Fine*, 837 F.2d 1071, 1074 (Fed. Cir. 1988). Specifically, the Examiner must prove such a desire to combine references with "substantial evidence" that is a result of a "thorough and searching" factual inquiry. *In re Lee*, 277 F.3d 1338, 1343-1344 (Fed. Cir. 2002). The Federal Circuit has on numerous occasions stated that to establish a prima facie case of obviousness an Examiner must show that the references, taken alone or in combination, (1 ) would have suggested to or provided motivation for one of ordinary skill in the art to make the claimed invention; (2) would have provided one of ordinary skill with a reasonable expectation of success in so making; and (3) teach all the present claim limitations. See *In re Vaeck*, 20 U.S.P.Q.2d 1438, 1442 (Fed. Cir. 1991) (citing *In re Dow Chemical Co.*, 837 F.2d 469, 473, 5 U.S.P.Q.2d 1529, 1531 (Fed. Cir. 1988)); see also M.P.E.P. §2143. "Both the suggestion and the reasonable expectation of success must be found in the prior art reference, not in the applicant's disclosure." *In re Vaeck* at 1442 (emphasis added).

Presently, claims 1-3, 5-37, and 39-45 stand rejected under 35 U.S.C. §103(a) as being obvious over WO 99/44960 ("Novich") for reasons discussed at pages 5-7 of the Final Office Action. Specifically, the Examiner states that "the sizing of Novich et al., functions in the same capacity within the scope of the (sic) as the presently claimed 'matrix' material" and, as a result, would render obvious the invention claimed in claims 1-3, 5-37, and 39-45. Applicants respectfully submit that the Examiner has failed to

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establish a prima facie case of obviousness at least because the Examiner has not shown that the cited prior art reference teaches all of the limitations of the presently rejected claims.

Applicants respectfully submit that the rejections under § 103(a) are fatally flawed because Novich does not teach all of the limitations of claims 1-3, 5-37, and 39-45. As discussed above, the proposed amendments to claims 1, 20, 21, 28, 29, and 45, in which the disputed phrase "in contact with" is replaced with "impregnating", serve to further distinguish the pending claims from the prior art, wherein a distinction is made between the matrix material of the presently claimed invention and the aqueous sizing composition found in Novich. Whereas a sizing composition is a very thin coating, existing primarily in two dimensions, the matrix material of the present invention serves to impregnate at least a portion of the woven fiber reinforcement, thereby providing three-dimensional structure. Consequently, when read in light of the currently proposed amendments, the Examiner has failed to demonstrate that Novich, which lacks an impregnating matrix material with at least one non-fluorinated polymer and at least one inorganic filler, adequately teaches all of the present claim limitations. The rejection is thus improper and Applicants respectfully request that it be withdrawn.

B. Rejection of Claims 3, 22, and 32

With respect to claims 3, 22, and 32, by stating in part that Novich "does not teach removing the sizing", the Examiner fails to acknowledge that absent from Novich is the unambiguous teaching that the aqueous sizing composition, with which the glass fiber strands are treated, is resin compatible. As such, the Examiner's rejection under

§ 102 fails since the claimed subject matter is not identically described or disclosed in the prior art. *In re Arkley*, 455 F.2d 586, 587 (C.C.P.A. 1972).

In lieu of such a specific indication that Novich possesses a resin compatible coating, the Examiner states that "absence of a specific teaching to remove the size coating effectively suggests that the woven glass fiber reinforcement is and must be non-greased." Final Office Action at 5 (emphasis added). By stating that such a finding is "effectively suggest[ed]" by the claims themselves, the Examiner maintains the assertion from the initial Office Action that "it is obvious that the woven glass fiber reinforcement of Novich et al., is non-degreased." November 19, 2002, Office Action at 6.

In doing so, however, the Examiner overlooks the requirement that the rejected matter teach or suggest all the present claim limitations in order to establish a prima facie case of unpatentability over prior art. See *In re Vaeck*, 20 U.S.P.Q.2d 1438, 1442 (Fed. Cir. 1991) (citing *In re Dow Chemical Co.*, 837 F.2d 469, 473, 5 U.S.P.Q.2d 1529, 1531 (Fed. Cir. 1988)); see also M.P.E.P. §2143. By specifically stating in the rejection that a limitation is *effectively suggested* by the teachings of Novich, the Examiner is admitting that Novich does not literally teach all the presently rejected claim limitations.

The Examiner's rejection of claims 3, 22, and 32, therefore, is based on implication. In making this rejection based on implication, however, the Examiner fails to consider the claimed invention as a whole. *Hodosh v. Block Drug Co., Inc.*, 786 F.2d 1136, 1143 n.5, 229 U.S.P.Q. 182, 187 n.5 (Fed. Cir. 1986); see also M.P.E.P. § 2141. When this is done, it is found that independent claims 1, 20, 21, 28, 29, and 45 have been amended as detailed previously to further distinguish the presently claimed

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invention from the Examiner-cited prior art. Since it is imperative that claims 3, 22, and 32 be read in light of independent claims 1, 21, and 29 from which they respectively depend, Applicants respectfully submit that Novich does not teach or suggest *all* the present claim limitations found in the presently rejected claims. Thus, Applicants submit that these rejections are improper under § 102(a) and § 103(a), both of which require a teaching of all the present claim limitations, and request that they be withdrawn.

C. Rejection of Claims 11, 12, 24, 33, 34, 36, and 37

Furthermore, with respect to the rejection of claims 11, 12, 24, 33, 34, 36, and 37, the Examiner states that "since Novich et al., meets each and every chemical and structural requirement set forth in the claims, then it must meet the physical property limitations recited that depend from said requirements." Final Office Action at page 6. Like the rejections of claims 3, 22, and 32, the Applicants respectfully point out that independent claims 1, 20, 21, 28, 29, and 45 have been amended to further distinguish them from Novich. Since it is imperative that claims 11, 12, 24, 33, 34, 36, and 37 be read in light of amended independent claims 1, 21, and 29 from which they respectively depend, Applicants submit that Novich does not meet each and every chemical and structural requirement set forth in the claims, as stated by the Examiner. Thus, Novich cannot be found to teach or suggest *all* the present claim limitations found in the presently rejected claims. Applicants respectfully submit that these rejections are improper and respectfully request that they be withdrawn.

**IV. Rejection under 35 U.S.C. § 103(a) Over Novich in View of Sproull**

Claim 4 has been rejected under 35 U.S.C. §103(a) as unpatentable over WO 99/44960 to Novich et al. ("Novich") in view of U.S. Patent No. 4,542,106 to Sproull

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("Sproull"). Applicants respectfully traverse this rejection for at least because the Examiner has not and indeed cannot show, at a minimum, that upon combination the two references would teach all the limitations of claim 4. See *In re Vaeck*, 20 U.S.P.Q.2d 1438, 1442 (Fed. Cir. 1991) (citing *In re Dow Chemical Co.*, 837 F.2d 469, 473, 5 U.S.P.Q.2d 1529, 1531 (Fed. Cir. 1988)); see also M.P.E.P. §2143.

As the Examiner correctly points out, Novich, the primary reference, fails to teach a glass composition comprising  $\text{Fe}_2\text{O}_3$ . Since Novich fails to teach such a glass composition, the Examiner states that one would be motivated to modify the primary reference by incorporating aspects of Sproull. Specifically, the Examiner states that "motivated to have glass fibers with excellent tensile strength and electrical properties it would have been obvious to one having ordinary [skill] in the art at the time of the invention was made (sic) to use the novel glass compositions taught by Sproull, in the electrical support of Novich et al." Final Office Action at page 7.

Applicants respectfully point out that independent claims 1, 20, 21, 28, 29, and 45 have been amended to further distinguish them from Novich. Since it is imperative that claim 4 be read in light of independent claim 1 from which it depends, Applicants reiterate that Novich does not meet each and every chemical and structural requirement set forth in amended claim 4. Although Sproull does teach a glass fiber that contains trace amounts of an  $\text{Fe}_2\text{O}_3$  impurity, the reference does not disclose any type of matrix material containing at least one non-fluorinated polymer and at least one inorganic filler that functions to impregnate fiber reinforcement material. As a result of this, Sproull does not cure the deficiencies of Novich since the combination of the two references

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does not teach or suggest the claim limitations found in claim 4. Applicants respectfully submit that this rejection is improper and respectfully request that it be withdrawn.

**V. Rejection under 35 U.S.C. § 103(a) Over Novich in View of Satoshi**

Similar to Claim 4, Claim 38 has been rejected under 35 U.S.C. § 103(a) as unpatentable over WO 99/44960 to Novich et al. ("Novich") in view of Japanese Patent Abstract, Publication No. 07-276563 to Satoshi et al. ("Satoshi"). Applicants respectfully disagree and traverse this rejection for at least the reasons set forth below.

Regarding Satoshi, the Examiner states that the reference "discloses a substrate sheet impregnated with a thermosetting resin comprising inorganic filler and a chelating agent" and that this chelating agent can be used to overcome the lack of such agent in Novich. Final Office Action at page 8. The Examiner then concludes that "motivated to provide a sizing composition having neutralized adhesive properties it would have been obvious [to Applicants] to use a chelating agent taught by Satoshi in the sizing composition of Novich." *Id.*

As with the Sproull reference, with Satoshi the burden is on the Examiner to show that the combination of the two references teaches all of the claim limitations of claim 38. Again, in light of the current amendments to claims 1, 20, 21, 28, 29, and 45, neither Novich nor Satoshi are able to do so. Since it is imperative that claim 38 be read in light of independent claim 29 from which it depends, Applicants submit that in light of the currently proposed amendments, the combination of Novich with Satoshi does not meet each and every chemical and structural requirement set forth in the claim, as stated by the Examiner, since the combination still lacks an impregnating matrix material comprising at least one non-fluorinated polymer and at least one

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inorganic filler. Thus, although Novich does not teach or suggest *all* the limitations found in the presently rejected claim, Satoshi is not able to rectify this omission. Applicants submit that this rejection is improper and respectfully request that it be withdrawn.

## **VI. Conclusion**

In view of the foregoing amendments and remarks, Applicants submit that this claimed invention, as amended, is neither anticipated nor rendered obvious in view of the prior art references cited against this application. Applicants therefore request the entry of this Amendment, the Examiner's reconsideration of the application, and the timely allowance of the pending claims. Early and favorable indication of the same is earnestly solicited.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 06-0916.

Respectfully submitted,

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Dated: October 6, 2003

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